December-19-12 12:52:27 PM Accept Item ID: D3121-144 *N900040100* Setup Start **Revision ID:** Item Name: Bracket Assembly **Start Date:** 12/19/12 Start Qty: 4.00 **Cust Item ID:** Required Date: 1/11/13 **Req'd Qty:** 4.00 **Customer:** Reference: Run Start **Tooling: Process Plan: Approvals:** Stop Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Accept Reject Reject Code Qty Qty Number Stamp Work Center ID Description **Run Hours** Draw Nbr **Revision Nbr** D3121 Rev E 100 0.00 2013-01-28 **BAND SAW** *100* 0.00 Bandsaw Memo Cut blanks: (1.250" x 2.000") 4.425" long Jeaspa Bandsaw 0.00 110 HAAS CNC VERTICAL MACHINING #1 *110* 0.00 HAAS I Memo 1-Machine D3121-114 as per Folio FA330 and Dwg D3121 Identify as D3121-HAAS CNC vertical machine #1 1142-Deburr3-Scribe batch number

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Memo

0.00

Quality Control

DAS 13.31.30 (4)

												DQA:	Date:	٤ , ٩
NCR:	Yes	/ No					WORK ORDER NON-C	COI	NFORM	AANCE / UP	DATE			
						_						QA Closed:	Date:	•
Nork Ord	ler:					ŀ	DISPOSITION				AGAINST DI	EPARTMENT	/PROCESS	
		-		_		ı	Rework			Skid-tube Crosstube			Water Jet	Engineering
Part	No.					1	Scrap	1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
						1	Use-as-is		Therm	noforming	Finishing	Rec/Stor	re/Packaging	Other
NCR	No.						Work Order Update	1		Large Fab	Composite]	Supplier	
Root					Desci	rin	tion of work order update		nitial		ction	Sign &		
Cause		Date	Step	Qty	Desci		r Non-conformance	1	ief Eng		cription	Date	Verification	QC Inspector
oc/Data	Г	Dute	Jiep	4.7		<u> </u>	THOIR COMOTINATION	-	ici Elig		приоп	Dute	Verification	Qe mapeetor
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		Cracks			• _	ا_	Broken/Damaged		1	or Incomplete	1_	Part Incorre	ct	Weld
	L	Crushed/0	Crimped,		L	_	Burrs	\perp	1	ions Incomplete/	/Unclear	Part Lost/Mi	issing	Wrong Stock Pulled
	L	Cuffs Contamination		L	Mainte	nance		Part Moved						
		Heat Trea	-		L	-	Countersink		Mislabe			Positioned V		_
	Inspection Strip in Tube Cut Too Short			Misread			Power Loss/	Surge	Other					
		Ripples in				_	Drill Holes	Offset						
	L	Torque W	aves in E	xtrusion	L	_	Drawing		Out of C	Calibration				
Turning Sequence Finish				Out of Sequence										

Outside Dimensions

Wave/Twist in Tube

Folio

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QC5- Inspect part completeness to step on W/O

150

QC

Quality Control

150

Memo

NCR:	Yes	/	Nο

DQA: _____ Date: ____

NCR:	Yes	/ No				WORK ORDER NON-	COI	NFURI	VIFUNCE / UPI	DATE	QA Closed:	Date:			
Nork Ord	er.					DISPOSITION		AGAINST DEPARTMENT/PROCESS							
Part No.			Rework Scrap	Skid-tube Crosstube Machining Small Fab			4	Water Jet	Engineering Quality						
NCR No.			Use-as-is Work Order Update				Finishing Composite	Rec/Stor	e/Packaging Supplier	Other					
Root					Descr	iption of work order update		Initial	Act	tion	Sign &				
Cause	l	Date	Step	Qty		or Non-conformance	Ch	ief Eng	Desci	ription	Date	Verification	QC Inspector		
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quip/Tooling															
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upplier	Ш														
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napproved									,						
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Landi	ng G	ear				General		,			_		-		
		Bending				Bend		Grain			Ovalized		Pressure/Forced		
		Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure		
		Cracks				Broken/Damaged		Inspect	on Incomplete		Part Incorre	ct	Weld		
		Crushed/0	Crimped.			Burrs		Instruct	ions Incomplete/	Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled		
		Cuffs				Contamination] Mainte	enance		Part Moved				
		Heat Trea	ıt			Countersink		Mislabe	eled		Positioned V	Vrong			
		Inspection	n Strip in	Tube		Cut Too Short	Г	Misread	d		Power Loss/	Surge	Other		
	Ripples in Bend Drill Holes				Offset										
	П	Torque W		xtrusio	n	Drawing	Out of Calibration								
Turning Sequence Finish						Out of Sequence									
F-1					-	Folio		Outside Dimensions							

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94571

Page 3

December-19-12	. 12:32:2/	PM										
Item ID:	D3121-144			Accept	*N900	040	100)*	Setup	Start	*N	S1 *
Revision ID:								-		Stop	- L. B. I	
Item Name:	Bracket Asse	embly								Stop	*N:	S2*
Start Date:	12/19/12	Start Qty: 4.00	*4*		Cust Item 1	ID:						
Required Date:	1/11/13	Req'd Qty: 4.00	*4*		Customer:							
Reference:			_									
Approvals:	Process P	lan:	Date:	Tooling:	D	ate:			Run	Start	*N	R1*
	QC:		Date:	SPC (Y/N):	D	ate:				Stop	*N	R2*
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reje Qty		Reject Number	Insp. ~
160		Identify as per dwg & S	tock Location: 57235	TA 0.00								
160 Packaging		Memo		0.00				4				13-02-01
Packaging												
										ı	١	10
170		QC21- Final Inspection	- Work Order Release	0.00					ſ	2/2	سرا ه	W/ L
17N									l	1/2	ナロ	
QC		Memo		0.00						7		
Quality Control												
												. 10
											·	1/4

WB 024

			DQA:	Date:	
NCR:	Yes / No	WORK ORDER NON-CONFORMANCE / UPDATE			•

											QA Closed:	Date	•
Work Orde	er:			•		DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	,
Part No						Rework Scrap Use-as-is Work Order Update		Skid-tube Crosstube Machining Small Fab Thermoforming Finishing Large Fab Composite			-	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root	\Box				Descri	ption of work order update	lı	nitial	Ad	ction	Sign &		
Cause	-	Date	Step	Qty	(or Non-conformance	Chi	ef Eng	Desc	cription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training													Â
Unapproved	Н												
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	· · · ·		·	.		F	AUL	T CATE	GCIRY			•	
Landir	ng G	ear				General			<u> </u>				
		Bending Centre No Cracks	ot Concer	ntric to	o/s	Bend BOM/Route Broken/Damaged		•	ion Incomplete		Ovalized Over/Under Part Incorre	ct .	Pressure/Forced Temperature/Cure Weld
	∐'	Crushed/0	Crimped.		L	Burrs	Ш	Instruct	tions Incomplete,	/Unclear	Part Lost/M	issing	Wrong Stock Pulled
	${f -}$	Cuffs			1_	Contamination	\vdash		enance		Part Moved		
	\bigsqcup	Heat Trea	it			Countersink	Ш	Mislabe	eled		Positioned \		
		Inspection	•	Tube	<u> </u>	Cut Too Short	Ш	Misrea	d	L	Power Loss/	'Surge	Other
	${f -}$	Ripples in				Drill Holes	Ш	Offset					
	-	Torque W			ր	Drawing	Ш		Calibration				
Turning Sequence			Finish	Out of Sequence					******				
Wave/Twist in Tube				Folio	1	Outside Dimensions							

Picklist Print

December-19-12 12:52:26 PM

Work Order ID:

94571

Parent Item:

D3121-144

Parent Item Name:

Bracket Assembly

Start Date: 12/19/12

Required Date: 1/11/13

Start Qty: 4.00

Required Qty: 4.00

Comments:

IPP Rev:Pick:A04.02.18New issueKJ/DS

IPP Rev:B ECN 1060 07-11-12 DD verified by:EC

Component Item ID/ tem Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Date Issued Issued	Status
33121-21 Bolt		Manufactured	No			140	Each	48.0000	2		153 B	2/61
				Location		Loc Qty	Lo	oc Code		//	/ /	/
				ST235		48						
				7 973	32	4					anders	V) (X)
				8566		1					K9450	$\mathcal{O}(\mathcal{O})$
				8949		1					0110	
				8996 9236		34					01	
3121-241 learing Assembly		Manufactured	No	9230	30	100	Each	53.0000	2	8	53/6	0/0/
				Location		Loc Qty	<u>L</u>	oc Code				l
				FG		4				/	QQEQ.	27/8
				8982	26	. 4					DISI	
				ST235A		49						
				9195	54	49						
1174B1.250X02.000 7-4 SS Bar 1.250 x 2.00		Purchased	No			140	f	28.3653	0.368	1.54947	36	
				Location		Loc Oty	<u>L</u>	oc Code				
				MAT049		28.3653						
				114		2						
				1192		2						
				122: 123:		6.23 18.1353						
	•			M 125		10.1333			7,5	549	TRE/12 2013	5-01-2

												DQA:	Da	te:	٠ ت
NCR:	/es	/ No				WORK ORDER NON-O	100	NFORM	MANCE / UP	DATE		•		-	
		·										QA Closed:	Da	te:	
Work Orde	ar.					DISPOSITION				AGAINST	DE	PARTMENT	PROCESS		
WOIR Old	-1.					Rework	1		Skid-tube	Crosstube		I	Water Jet		Engineering
Part I	Nο					Scrap	1		Machining	Small Fab	_	Pro	d. Eng. Coor.	Н	Quality
i	٠٠.		/			Use-as-is	1		noforming	Finishing	-	4	e/Packaging	Н	Other
NCR I	No.					Work Order Update			Large Fab	Composite	_		Supplier	-	H
				·			_								
Root					Descri	ption of work order update		Initial	Ac	tion		Sign &			
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Desc	ription		Date	Verificatio	n	QC Inspector
Doc/Data															
Equip/Tooling		·													•
Operator							1								
Material														ļ	
Setup															
Other							1						•		
Process															
Supplier													,		
Training														ļ	
Unapproved															
						F	AUI	T CATE	GCIRY						
Landi	ng G	Gear				General		_				-			•
		Bending				Bend		Grain			L	Ovalized			Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	re		L	Over/Under	tolerance		Temperature/Cure
		Cracks				Broken/Damaged	L	Inspecti	on Incomplete			Part Incorred	ct		Weld
		Crushed/	Crimped.			Burrs		Instruct	ions Incomplete/	Unclear		Part Lost/Mi	ssing	'	Wrong Stock Pulled

Maintenance

Out of Calibration
Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Part Moved

Positioned Wrong

Power Loss/Surge

Other

Contamination

Countersink

Cut Too Short Drill Holes

Drawing

Finish Folio

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Cuffs

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

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DART AEROSPACE LTD	Work Order:	94571
	,	
Description: Bracket	Part Number:	D3121-114
Inspection Dwg: D3121 Rev: E		Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

Drawing		Actual		D-:	Method of	0
Dimension	Tolerance	Dimension	Accept	Reject	Inspection	Comments
0.080	+/-0.010	.087				
0.300	+/-0.010	, 300	/			
R0.375	+/-0.010	,375				
1.54	+/-0.030	1.542				
0.350	+/-0.010	.352				
R0.25	+/-0.030	. 250				
Ø0.392	+0.002/-0.000	-3934				
Ø0.201	+0.005/-0.000	,202				
0.100	+/-0.010	.102				

2.540	+/-0.010	2-536				
1.590	+/-0.010	1.586				
0.160	+/-0.010	.157				
0.400	+/-0.010	.401				
1.220	+/-0.010	1.230				
1.600	+/-0.010	1.605				
3.80	+/-0.030	3.799				
1.800	+/-0.010	1,804				
R0.50	+/-0.030	1200				
0.130	+/-0.010	.133				
3.41	+/-0.030	3.385				
3.65	+/-0.030	3.675				
2.24	+/-0.030	2.24				
45°	+/-0.1°	453				
R0.25	+/-0.030	.250				
3.97	+/-0.030	3.980				•
R0.38	+/-0.030	.330				, and the second
Ø0.392	+0.002/-0.000	.3936				
Ø0.392 Ø0.201	+0.002/-0.000					
0.268	+/-0.010	, 269		<u> </u>		
R0.260	+/-0.010	.250				
0.080	+/-0.010	,083				
0.300	+/-0.010	. 298				
0.381	+/-0.010	.780				
0.201	+/-0.010	. 204				
0.201	77-0.010	L . F U		<u> </u>	1	

DART AEROSPACE LTD	Work Order:	9457/
Description: Bracket	Part Number:	D3121-114
Inspection Dwg: D3121 Rev: E		Page 2 of 2

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.580	+/-0.010	540				
0.400	+/-0.010	,401				
		·				
100°	+/-0.1°	(ϡ				
0.032	+0.000/-0.010	.0 ⁻ >0				
· · · · · · · · · · · · · · · · · · ·						
						,
	# Da	ű.				

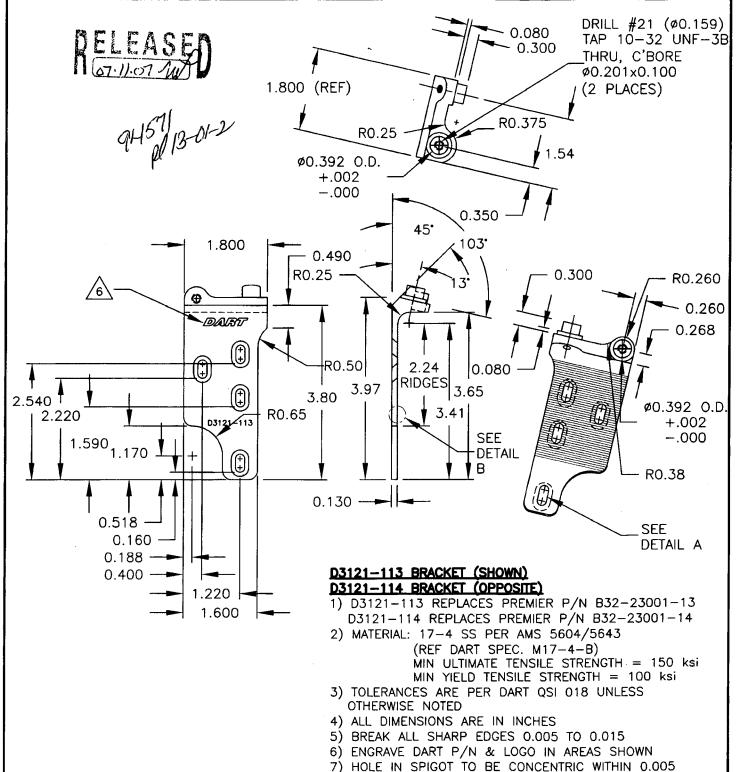
Measured by: Audited by: Audited by: Date: N/A

Date: 13 01 30 Date: N/A

Rev	Date	Change	Revised by	Approved
Α	03.12.08	New Issue P/O D3121-144	KJ/RF	
В	04.05.05	Dimensions changed/re-arranged per Dwg revision	KJ/JLM	
С	06.06.14	Dwg Rev. updated	KJ/JLM	<u> </u>
D	08.01.16	Dimensions updated per Dwg Rev E	KJ/EC/DD,	
E	08.05.20	0.032 dimension was 0.32	KJ/DD 🚓	



DESIGN	DRAWN BY	DART AEROSF HAWKESBURY, ONTAF	
CHECKED	APPROVED	DRAWING NO.	REV. E
4	-#	D3121	SHEET 8 OF 10
DATE		TITLE	SCALE
07.11.07		BRACKET ASSEMBLY	1:2

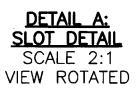


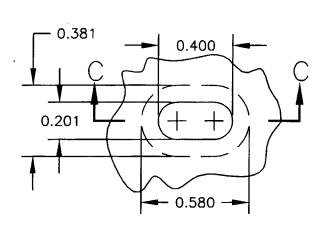
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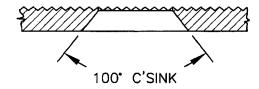
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1 9	-M	D3121	SHEET 3 OF 10
DATE		TITLE	SCALE
07.11.07		BRACKET ASSEMBLY	1:1



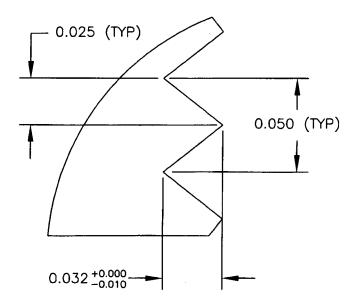




SECTION C-C



DETAIL B: RIDGE DETAIL PARTIAL SECTION **SCALE 1:20**

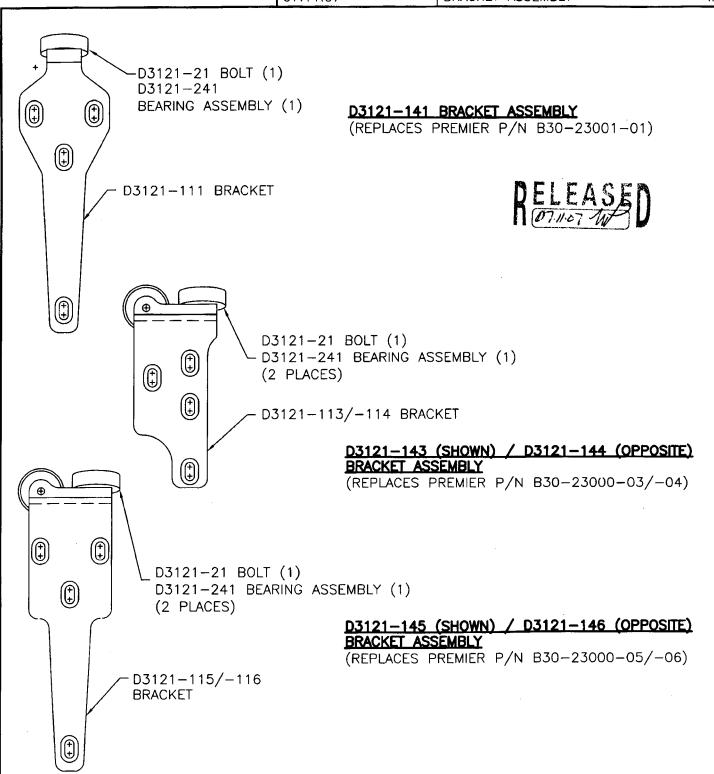


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CHECKED	AP?ROVED	DRAWING NO. D3121	REV. E SHEET 2 OF 10
DATE		TITLE	SCALE
07.11.07		BRACKET ASSEMBLY	1:2



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